USGS science for a changing world

Earthquake Shaking **Green** Alert

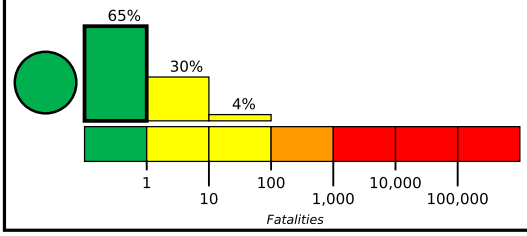
GSN USAID FROM THE AMERICAN PEOPLE ANSS

M 4.5, 20km W of El Sauzal, B.C., MX

Origin Time: 2022-04-15 04:30:53 UTC (Thu 21:30:53 local)
Location: 31.8544° N 116.9538° W Depth: 14.4 km
FOR TSUNAMI INFORMATION, SEE: tsunami.gov

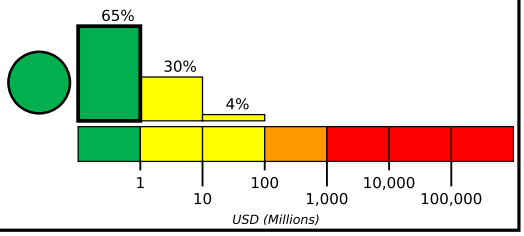
PAGER Version 18
Created: 2 weeks, 6 days after earthquake

Estimated Fatalities



Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.

Estimated Economic Losses

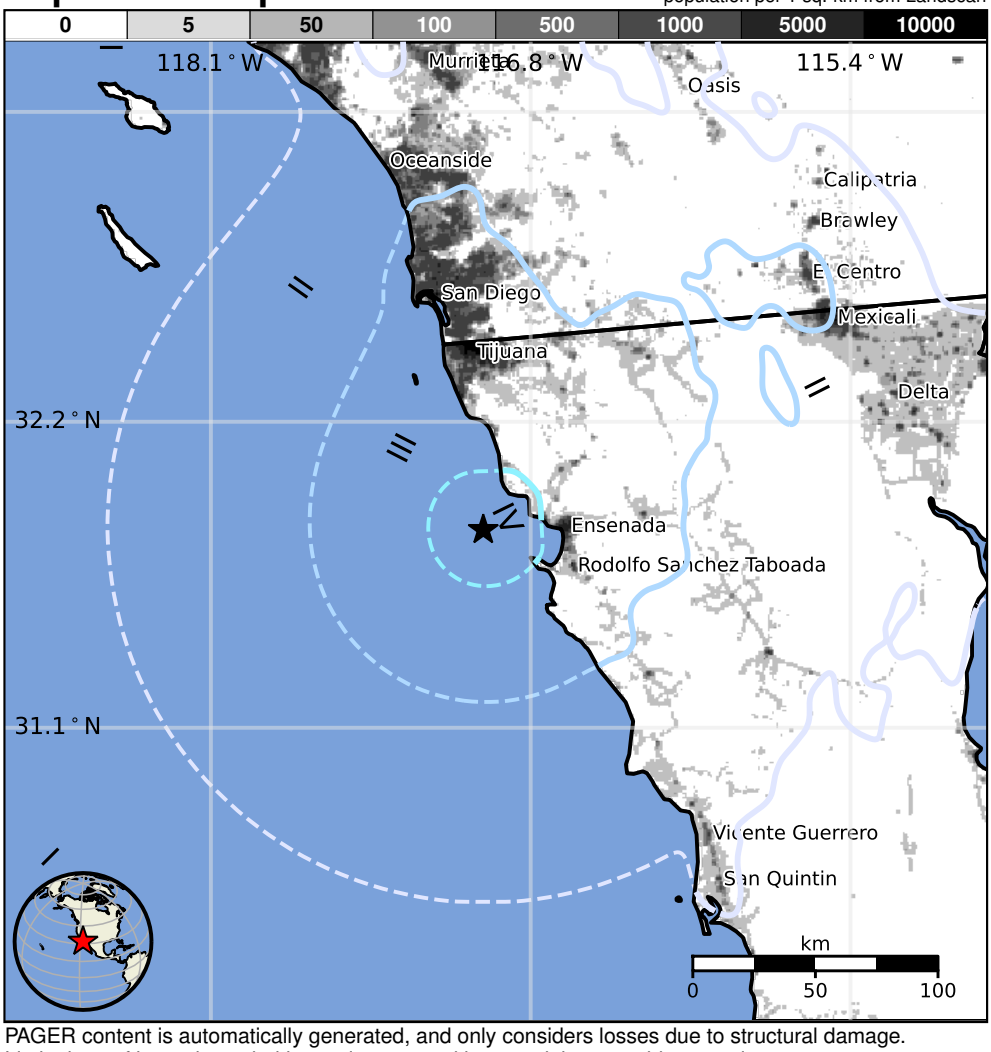


Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		80k*	8,201k	22k	0	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		**I**	**II-III**	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	**X+**
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	**Resistant Structures**	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure



Structures

Overall, the population in this region resides in structures that are resistant to earthquake shaking, though vulnerable structures exist. The predominant vulnerable building types are unreinforced brick masonry and reinforced masonry construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1991-06-28	282	5.6	VI(1,267k)	1
1992-06-28	262	7.3	VIII(23k)	1
1971-02-09	313	6.6	IX(21k)	65

Recent earthquakes in this area have caused secondary hazards such as landslides and liquefaction that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
IV	El Sauzal	9k
III	Imperial Beach	26k
III	Santa Anita	1k
III	Bostonia	15k
III	Rancho San Diego	21k
III	Quinta del Cedro	6k
III	Chula Vista	244k
III	**San Diego**	**1,307k**
III	**Ensenada**	**257k**
III	**Tijuana**	**1,376k**
II	**Mexicali**	**597k**

bold cities appear on map. (k=x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.
https://earthquake.usgs.gov/earthquakes/eventpage/ci40236864#pager

Event ID: ci40236864